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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/913,327

08/13/2001

Yukio Yasuda

7080

20277 7590 01/24/2007
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EXAMINER

HUNTSINGER, PETER K

ART UNIT

PAPER NUMBER

2625

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/24/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	09/913,327		YASUDA, YUKIO	
	Examiner		Art Unit	
	Peter K. Huntsinger		2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 10/30/06 have been fully considered but they are not persuasive.

The applicant argues on pages 10-12 of the response in essence that:

Koshi et al. does not teach a plurality of unit controllers.

- a. Hunt, Jr. et al. discloses a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19), wherein each of said plurality of unit controllers transfers the at least one separate plate data to a printing unit (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a plurality of printing units. Koshi et al. discloses a plurality of printing units (recorders 7Y, 7M, 7C, and 7K of Fig. 1, col. 7-8, lines 62-67, 1-4).

The applicant argues on pages 11 and 12 of the response in essence that:

Separately forming YMCK color images on a sheet is not intended to improve printing speed and thus there is not motivation for combining Koshi et al. with Hunt, Jr. et al.

- b. Hunt, Jr. et al. disclose separating color components and printing each color component separately with one printing unit. Koshi et al. disclose printing utilizing 4 printing units. The motivation for combining Koshi et al. with Hunt, Jr. et al. is not for separating color components and then printing color components separately, the motivation is for printing already separated color components.

The 4 printing units of Koshi et al. would be faster than the 1 printing unit of Hunt, Jr. et al. because the 4 printing units could operate simultaneously. Further, Hunt, Jr. et al. describes the advantage of parallel operation over series operation at the expense of duplicating hardware (col. 10, lines 51-54)

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 8, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt, Jr. et al. Patent 5,003,496, and further in view of Fuller Patent 4,809,164 and Koshi et al. Patent 5,821,969.

Referring to claim 1, Hunt, Jr. et al. discloses a printing system performing printing on the basis of digital data, comprising: a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19); and a server controller managing said plurality of unit controllers (ICE 16 of Fig. 1, col. 4, lines 12-17); wherein said server controller has command means commanding the plurality of unit controllers to share a process of creating a plurality of separate plate data (col. 10, lines 15-24), the process including rasterization of each color component of digital data of objective matter to be printed (col. 12, lines 48-54), each of said plurality of unit controllers has separate plate data creation means creating at least one separate plate data among said plurality of

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separate plate data from the digital data of said objective matter to be printed on the basis of the command by said command means (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a unit controller notifying a server controller when it is ready to process data. Fuller disclose in response to an inquiry by a server controller, each of said plurality of unit controllers notifies said server controller whether preparation is completed, and said server controller sends each of said plurality of unit controllers a command to on condition that said preparation is completed (col. 4-5, lines 53-68, 1-2). Hunt, Jr. et al. and Fuller are combinable because they are from the same field of electronic data processing systems. At the time of the invention, it would have obvious to a person of ordinary skill in the art to poll controllers to determine if they are ready to process data. The motivation for doing so would have been to send data to controllers when they are capable of processing that data. Hunt, Jr. et al. further discloses a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19), wherein each of said plurality of unit controllers transfers the at least one separate plate data to a printing unit (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a plurality of printing units corresponding to the unit controllers. Koshi et al. disclose a plurality of printing units, wherein a unit controller transfers, with respect to the corresponding printing unit, at least one separate plate data whose printing output is taken charge of in said printing unit (recorders 7Y, 7M, 7C, and 7K of Fig. 1, col. 7-8, lines 62-67, 1-4). Hunt, Jr. et al. and Koshi et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a plurality of printing units with

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the system of Hunt, Jr. et al. The motivation for doing so would have been to improve the speed of printing color images. Therefore, it would have been obvious to combine Fuller and Koshi et al. with Hunt, Jr. et al. and Fuller to obtain the invention as specified in claim 1

Referring to claim 3, Hunt, Jr. et al. discloses wherein said server controller has separate plate data storage means storing said plurality of separate plate data created in said plurality of unit controllers (col. 10, lines 15-19), each of said unit controllers transfers the separate plate data stored in said separate plate data storage means of said server controller to a printing unit (col. 10, lines 43-50). Koshi et al. disclose a plurality of printing units (col. 7-8, lines 62-67, 1-4).

Referring to claim 4, Fuller discloses wherein said server controller has monitoring means monitoring work contents of each of said plurality of unit controllers (col. 4-5, lines 53-68, 1-2).

Referring to claims 5 and 6, Hunt, Jr. et al. discloses a server controller (ICE 16 of Fig. 1, col. 4, lines 12-17) in a printing system performing printing on the basis of digital data, comprising; command generation means generating a first command to share a process of creating a plurality of separate plate data between a plurality of unit controllers (col. 10, lines 21-24), said process including rasterization of each color component of digital data of objective matter to be printed (col. 12, lines 48-54); and transmission means transmitting said first command to each of the plurality of unit controllers (col. 10, lines 43-50). Hunt, Jr. et al. do not disclose expressly a unit controller notifying a server controller when it is ready to process data. Fuller disclose a

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server controller sends each of a plurality of unit controllers an inquiry as to whether preparation for creation of separate plate data is completed, and sends each of said plurality of unit controllers an instruction to create separate plate data on condition that a reply notifying completion of said preparation is received (col. 4-5, lines 53-68, 1-2).

Hunt, Jr. et al. and Fuller are combinable because they are from the same field of electronic data processing systems. At the time of the invention, it would have obvious to a person of ordinary skill in the art to poll controllers to determine if they are ready to process data. The motivation for doing so would have been to send data to controllers when they are capable of processing that data. Hunt, Jr. et al. further discloses said command generation means is further configured for generating a second command to transfer at least one separate plate data to a printing unit corresponding to said each of the plurality of unit controllers among a printing unit; and said transmission means is further configured for transmitting said second command to each of the plurality of unit controllers (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a plurality of printing units corresponding to the unit controllers. Koshi et al. disclose a plurality of printing units, wherein a unit controller transfers, with respect to the corresponding printing unit, at least one separate plate data whose printing output is taken charge of in said printing unit (recorders 7Y, 7M, 7C, and 7K of Fig. 1, col. 7-8, lines 62-67, 1-4).

Hunt, Jr. et al. and Koshi et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a plurality of printing units with the system of Hunt, Jr. et al. The motivation for doing so would have been to improve the speed of printing color

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images. Therefore, it would have been obvious to combine Fuller and Koshi with Hunt, Jr. et al. to obtain the invention as specified in claims 5 and 6.

Referring to claim 8, Hunt, Jr. et al. discloses wherein the process of creating the plurality of separate plate data includes separation of the digital data into a plurality of color components by the plurality of unit controllers (302 of Fig. 16, col. 10, lines 30-33) before the rasterization of each color component of the digital data is performed (304 of Fig. 16, col. 10, lines 33-48) (208 of Fig. 14, col. 9, lines 64-67).

Referring to claim 10, Hunt, Jr. et al. discloses wherein separate plate data creation means is configured for separating the digital data into a plurality of color components (302 of Fig. 16, col. 10, lines 30-33) before the rasterizing of each at least one color component of the digital data (304 of Fig. 16, col. 10, lines 33-48) (208 of Fig. 14, col. 9, lines 64-67).

Referring to claim 14, Hunt, Jr. et al. discloses a server controller, but does not disclose expressly wherein said server controller monitors the work of the unit controllers. Fuller discloses wherein said server controller has monitoring means monitoring work contents of each of said plurality of unit controllers (col. 4-5, lines 53-68, 1-2). Hunt, Jr. et al. and Fuller are combinable because they are from the same field of electronic data processing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to monitor the work of unit controllers. The motivation for doing so would have been to improve efficiency by tracking performance and problems of the controllers. Therefore, it would have been obvious to combine Fuller et al. with Hunt, Jr. et al. and Koshi et al.

4. Claims 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt, Jr. et al. Patent 5,003,496, Fuller Patent 4,809,164, and Koshi et al. Patent 5,821,969 as applied to claims 1 and 5 above, and further in view of well known prior art.

Referring to claims 7 and 9, Hunt, Jr. et al. discloses separation of the digital data into a plurality of color components (302 of Fig. 16, col. 10, lines 30-33) before rasterization of each color component of digital data is performed by the plurality of unit controllers (304 of Fig. 16, col. 10, lines 33-48) (208 of Fig. 14, col. 9, lines 64-67). Hunt, Jr. et al. does not disclose expressly the separation of color components by the server controller. Official Notice is taken that it is well known and obvious in the art for a microprocessor to separate color components (See MPEP 2144.03). The motivation for doing so would have been to take advantage of the greater processing capabilities of the microprocessor than the capabilities the unit controllers.

5. Claims 11, 13, 16, 17, 19, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt, Jr. et al. Patent 5,003,496, and ~~Fuller~~ in view of Koshi et al. Patent 5,821,969. ✓

Referring to claim 11, Hunt, Jr. et al. discloses a printing system, comprising: a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19); and a server controller managing said plurality of unit controllers (ICE 16 of Fig. 1, col. 4, lines 12-17); wherein said server controller has command means for sending the

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plurality of unit controllers a command to share a process of creating a plurality of separate plate data among the plurality of unit controllers (col. 10, lines 15-24), the process including separation of digital data of objective matter to be printed into a plurality of color components, and rasterization of each color component of the digital data (col. 12, lines 48-54), each of said plurality of unit controllers has creation means for performing the process of creating at least one separate plate data among said plurality of separate plate data, based on the command from said command means, the creation means at least performing the rasterization of at least one color component of the digital data after the separation of the digital data (col. 10, lines 43-50). Hunt, Jr. et al. further discloses a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19), wherein each of said plurality of unit controllers transfers the at least one separate plate data to a printing unit (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a plurality of printing units corresponding to the unit controllers. Koshi et al. disclose a plurality of printing units, wherein a unit controller transfers, with respect to the corresponding printing unit, at least one separate plate data whose printing output is taken charge of in said printing unit (recorders 7Y, 7M, 7C, and 7K of Fig. 1, col. 7-8, lines 62-67, 1-4). Hunt, Jr. et al. and Koshi et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a plurality of printing units with the system of Hunt, Jr. et al. The motivation for doing so would have been to improve the speed of printing color images. Therefore, it would have been

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obvious to combine Koshi et al. with Hunt, Jr. et al. to obtain the invention as specified in claim 11.

Referring to claim 13, Hunt, Jr. et al. disclose wherein said server controller has separate plate data storage means storing said plurality of separate plate data created in said plurality of unit controllers (col. 10, lines 15-19), each of said unit controllers transfers the separate plate data stored in said separate plate data storage means of said server controller to a printing unit (col. 10, lines 43-50). Koshi et al. disclose a plurality of printing units (col. 7-8, lines 62-67, 1-4).

Referring to claim 16, Hunt, Jr. et al. disclose wherein each unit controller performs the separation of the digital data into the plurality of color components for the rasterization (302 of Fig. 16, col. 10, lines 30-33).

Referring to claims 17 and 19, Hunt, Jr. et al. disclose a server controller (ICE 16 of Fig. 1, col. 4, lines 12-17) in a printing system including a plurality of unit controllers (separate tint generators of Fig. 15, col. 10, lines 15-19), comprising; command generation means for generating a first command to share a process of creating a plurality of separate plate data among the plurality of unit controllers (col. 10, lines 21-24), said process including separation of digital data of objective matter to be printed into a plurality of color components (302 of Fig. 16, col. 10, lines 30-33), and rasterization of each color component of digital data (col. 12, lines 48-54); and transmission means transmitting said first command to each of the plurality of unit controllers (col. 10, lines 21-24) wherein said command means is further configured for generating a second command to transfer at least one separate plate data to a printing

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unit corresponding to said each of the plurality of unit controllers, and said transmission means is further configured for transmitting said second command to said each of the plurality of unit controllers a plurality of unit controllers (col. 10, lines 43-50). Hunt, Jr. et al. does not disclose expressly a plurality of printing units corresponding to the unit controllers. Koshi et al. disclose a plurality of printing units, wherein a unit controller transfers, with respect to the corresponding printing unit, at least one separate plate data whose printing output is taken charge of in said printing unit (recorders 7Y, 7M, 7C, and 7K of Fig. 1, col. 7-8, lines 62-67, 1-4). Hunt, Jr. et al. and Koshi et al. are combinable because they are from the same field of printing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a plurality of printing units with the system of Hunt, Jr. et al. The motivation for doing so would have been to improve the speed of printing color images. Therefore, it would have been obvious to combine Koshi et al. with Hunt, Jr. et al. to obtain the invention as specified in claims 17 and 19.

Referring to claim 20, Hunt, Jr. et al. disclose wherein the creation means is configured for separating the digital data into a plurality of color components (302 of Fig. 16, col. 10, lines 30-33) before the rasterizing of each at least one color component of the digital data (304 of Fig. 16, col. 10, lines 33-48) (208 of Fig. 14, col. 9, lines 64-67).

6. Claims 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hunt, Jr. et al. Patent 5,003,496 and Koshi et al. Patent 5,821,969 as applied to claims 11 and 17 above, and further in view of well known prior art.

Referring to claims 15 and 18, Hunt, Jr. et al. discloses separation of the digital data into a plurality of color components (302 of Fig. 16, col. 10, lines 30-33) but do not disclose expressly the separation of color components by the server controller. Official Notice is taken that it is well known and obvious in the art for a microprocessor to separate color components (See MPEP 2144.03). The motivation for doing so would have been to take advantage of the greater processing capabilities of the microprocessor than the capabilities the unit controllers.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

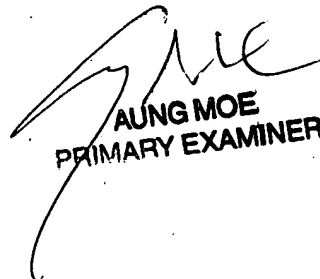
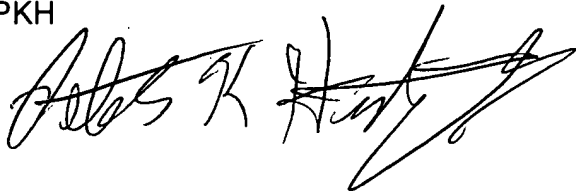
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter K. Huntsinger whose telephone number is (571)272-7435. The examiner can normally be reached on Monday - Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Moe Aung can be reached on (571)272-7314. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PKH



AUNG MOE
PRIMARY EXAMINER